

matters of economic importance are well looked after, and a lesson might profitably be learned in this country in that respect. Unfortunately, it deals mainly with insects of the American continent and so cannot fill the want here. It is divided into two parts, the first dealing with general entomology, the second with economic entomology. The junior author is responsible for part i., the senior for part ii.

The illustrations are numerous, and those in part ii. excellent, being mainly reproductions from the publications of the United States Department of Agriculture. Most of those in part i. are photographic reproductions, and this process does not lend itself to this subject, some of the figures being very indistinct and fogged and taken from very badly set specimens. The various orders are dealt with in a clear and simple manner, and there is a chapter on insect collection.

In the economic part the following are dealt with: insects affecting man and domestic animals, including ticks, mosquitoes, fleas, and warble-flies; insects affecting household goods; field-crop insects; and garden and orchard insects. There is also an excellent chapter on insect control, and appendices dealing with useful papers and books on American insect pests.

F. V. T.

The Chemical Analysis of Iron: A Complete Account of All the Best-known Methods for the Analysis of Iron, Steel, Pig-iron, Alloy Metals, Iron Ore, Limestone, Slag, Clay, Sand, Coal, and Coke. By A. A. Blair. Eighth edition. Pp. 318. (Philadelphia and London: J. B. Lipincott Co., 1918.) Price 21s. net.

BLAIR'S "Chemical Analysis of Iron" has long since made a name for itself among technical manuals. About a quarter of a century has elapsed since the writer of this notice first used the book, the second edition of which had just been published; and it is not surprising to find that so useful a work is still in demand.

Much has happened in the world of iron analysis since those days. Chiefly the changes have been in the increased use of steel alloys containing more or less of the "rare" elements, such as vanadium, uranium, molybdenum, and tungsten; and also of the "alloy metals," such as ferro-tungsten and ferro-molybdenum. Methods of analysing the former group have been brought together in this edition of the book, and a separate section has been allotted to the alloy metals. To chemists who have used former editions it will suffice to say that the present one has been recast and partly rewritten to include improvements of processes, but preserves its former characteristics of concise accuracy and judicious selection of methods. To those unacquainted with the book it may be said that they will find in it all the information necessary for carrying out iron and steel analysis to any degree of completeness that may be desired. The working details are sufficiently full, but not over-elaborated, and users will find the volume a trustworthy, practical guide.

C. S.

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LETTERS TO THE EDITOR.

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The Study of English in Italian Universities.

My friend, Prof. Piero Giacosa, of Turin, wrote to me some time ago requesting me to hand to you the enclosed paragraph of his letter dealing with the recently initiated attempt to bring about a scheme of educational collaboration between Italy and England. Since he wrote, the announcement has been made public that the Ministry of Public Instruction in Italy has decided upon the establishment of a number of chairs of English in the Italian universities. The suggestion contained in Prof. Giacosa's paragraph has reference to the possibilities of young British graduates acting as "lectors" for a limited period under the regular Italian professors of English, and doing work in this way as assistants to the professor.

The paragraph in question runs as follows:—

"Il Ministro della Pubblica Istruzione in Italia ha chiesto al Consiglio Superiore della Pubblica Istruzione, di dare il suo parere sulla proposta di fondare nelle università italiane cattedre di letteratura inglese. Il Consiglio ha applaudito al proposito del Ministro dichiarandolo di grande utilità per la elevazione della cultura universitaria. Gli studiosi inglesi che intendessero approfittare di queste disposizioni del Governo italiano per fare un corso di lezioni di letteratura inglese in una università italiana, possono dirigersi al Professore Piero Giacosa, Università di Torino, per avere schiarimenti al proposito."

[Translation:—"The Minister of Public Instruction in Italy has invited the Higher Council of Public Instruction to express its opinion on the proposal to establish a number of chairs of English literature in the Italian universities. The Council expressed its approval of the proposal, declaring it to be of the utmost value for the development of university studies. English graduates who would desire to avail themselves of these arrangements set up by the Italian Government should apply to Prof. Piero Giacosa, University of Turin, for information."]

EDWARD BULLOUGH.

6 Huntingdon Road, Cambridge, September 25.

The "Salary" of the Lecturer.

MAY I venture to direct attention to a curious inconsistency which appears to have escaped the notice of scientific men as much as it has that of the general public? Men of science and educationists are emphasising the need for a larger number of men and women with scientific training to carry out research, technical and academic, and to aid in the ordinary conduct of affairs, both now and after the war; while, judging from official educational advertisements, men with the highest qualifications are expected to train this new generation for a "salary" that compares most unfavourably with the "wages" of a factory hand. We demand that many shall receive a sound scientific education, and that able teachers for the purpose shall be provided; but either we are not prepared to pay a price which will attract any but mediocre or inefficient teachers, or we expect that those who teach will do so for the

love of teaching alone, and will obtain elsewhere the wherewithal to live.

It is not necessary to cite passages from the lectures and writings of our most distinguished scientific men dealing with the paramount necessity for more, and yet more, training in pure and applied science; the columns of *NATURE* provide, and always have provided, numerous examples. At the same time, any column of educational advertisements will provide numerous examples similar to the following, which are quoted from a recent list of "official advertisements." A well-known Scottish college asks for "an assistant lecturer for physics department; salary 150*l.*" A "chemistry tutor for a large teaching institution in London" is required; he must be "a high honour man, with teaching experience"—so that a youth who has just left college is *not* indicated—and 240*l.* is offered! Thus, either we are satisfied that a large proportion of university and college teaching shall be in the hands of men and women whose market value is only about 200*l.* a year—less than a moderately intelligent manual labourer in a munition factory can earn—or we expect our best-trained and keenest men and women, just because they happen to have the ability to teach or a liking for teaching, to accept a wage which will not allow them to live in a manner fitting to their station, and renders the proper feeding and schooling of their children a constant anxiety, and sometimes almost an impossibility. Certainly there is a third possible explanation: that no one has ever troubled to think about the matter! Is it not time for something definite to be done to remedy this state of affairs—a state which is obvious to anyone who happens to read both the text and the advertisements of any scientific journal? Moreover, the outlook for science teaching is serious, because one result of the war will be to open many promising careers to men and women with scientific training, and it is quite safe to say that, unless the position of the university teacher is very much improved, no one who can possibly obtain an appointment elsewhere will undertake the work of teaching unless he or she be a person of independent means. E. R. MARLE.

B.E.F., September 17.

The Arboreal Descent of Man.

PALEONTOLOGICAL evidence for the arboreal habit of the stem Placentals has been adduced by Matthew (1904). In particular, for the Primates the derivation of the order from large-brained arboreal Insectivores resembling in many ways *Tupaia* and *Ptilocercus* is indicated by many considerations (Gregory, 1910). Therefore, there are two possibilities: either the Hominidæ are directly descended from such a stock, and this is what Prof. Wood-Jones holds, or indirectly—that is, through an intermediate anthropoid stage, as is held by American palæontologists; but even in this case, as monkeys are arboreal animals, it is evident that Hominidæ never passed through a quadrupedal stage. V. GIUFFRIDA-RUGGERI.

Istituto di Antropologia, R. Università,
Napoli, September 17.

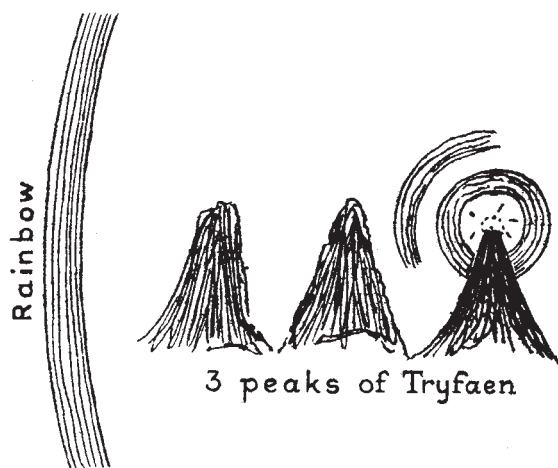
A Curious Rainbow.

IN North Wales, on August 20, about two hours before sunset, I saw a rainbow-effect which was quite new to me.

The summit of Tryfaen (some four miles north-east from that of Snowdon) has three sharp, rocky peaks running roughly north and south.

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We had climbed up the eastern cliff in a south-westerly gale, which brought up much cloud with some light showers, and were sitting just below the top of the southern peak. The Holyhead road lay north-east and 2000 ft. below us. From it rose the upright portion of a brilliant rainbow. At the centre of its circle was the shadow of our peak with those of the other two peaks to the left of it, all sharply defined. Around the shadow of our peak was a most vivid and persistent bow, the smallest I have ever seen, the radius of the inner edge being about half that of the outer. The central space changed a good deal, being frequently almost filled by a diffused yellow glow, which sometimes appeared to condense towards the centre until it resembled a nebulous sun on a whitish ground, while at intervals little yellow



streamers seemed to radiate from it to the inner edge of the bow. Outside this bow (which had the colours in regular rainbow order, red outside) was part of a third bow of perhaps double the diameter, but dim and intermittent.

We stood up and made gestures, expecting some sort of Brocken effect, but could detect none. However, as we were not on the extreme summit, and the cloud was very distant, our shadows would at best have been extremely minute.

Out of many "Brockens" that I have seen in different parts of the world the most vividly coloured was in Arctic Norway, the most curious and unexpected was on a blazing August day at sea-level in Portugal, and the most realistic on the Mendip Hills in Somerset.

The last was all the more effective for being within an uncoloured and inconspicuous ring.

W. P. H. S.

GERMAN INDUSTRY AND THE WAR.

II.

IN addition to explosives and what are ordinarily comprised under the term munitions, war requires for its prosecution a great variety of other articles, all of them more or less essential. Chief among these are coal, metals, alcohol, petrol, oils and fats, soap, glycerin, textiles, leather, wood, rubber, turpentine, lubricants, food, surgical appliances, and medicaments. It is of interest to learn how Germany has hitherto managed, in